

SONY®

3-758-531-41 (1)

Trinitron® Color Video Monitor

PVM-2054QM

PVM-1454QM

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Mode d'emploi

Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi et de la conserver pour tout référence ultérieure.

Bedienungsanleitung

Vor der Inbetriebnahme lesen Sie diese Anleitung sorgfältig durch und bewahren Sie sie zum späteren Nachschlagen auf.

Manual de instrucciones

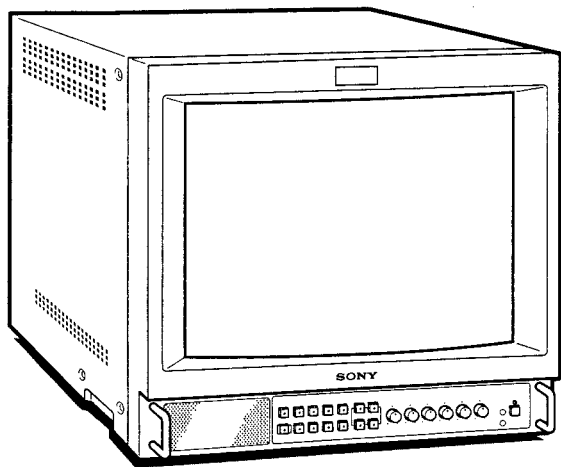
Antes de utilizar la unidad, lea este manual detenidamente y consérvelo para futuras referencias.

Istruzioni per l'uso

Prima di usare l'apparecchio, leggere con attenzione questo manuale e conservarlo per riferimenti futuri.

使用说明书

使用本机以前，请先详读本说明书，并留存本书以备将来参考之用。



This illustration shows PVM-1454QM.

Cette illustration représente le modèle PVM-1454QM.

Die Abbildung zeigt das Modell PVM-1454QM.

Esta ilustración corresponde al PVM-1454QM.

Questa illustrazione mostra il PVM-1454QM.

该图为 PVM-1454QM 机种的示意图。

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

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Precautions**On safety**

- Operate the unit on 100 – 240 V AC only.
- The nameplate indicating operating voltage, power consumption, etc. is located on the rear.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- To disconnect the AC power cord, pull it out by grasping the plug. Never pull the cord itself.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

On installation

- Allow adequate air circulation to prevent internal heat build-up.
Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On cleaning

To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since they will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your authorized Sony dealer.

Features

HR (High Resolution) Trinitron picture tube

HR Trinitron tube provides a high resolution picture. Horizontal resolution is more than 600 TV lines at the center of the picture.

Four color systems available

The monitor can display PAL, SECAM, NTSC and NTSC₄₄₃* signals. The appropriate color system is selected automatically.

* A signal of NTSC₄₄₃ is used for playing back NTSC recorded video cassettes with a video tape recorder/player especially designed for use with this system.

Blue only mode

In the blue only mode, an apparent monochrome display is obtained with all three cathodes driven with a blue signal. This facilitates color saturation and phase adjustments and observation of VCR noise.

Analog RGB/component input connectors

Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

Y/C input connectors

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, assuring video quality.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Comb filter

When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

Automatic termination (connector with $\wedge$ mark only)

The input connector is terminated at 75 ohms inside when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohms termination is automatically released.

Underscan mode

The signal normally scanned outside of the screen can be monitored in the underscan mode.

Note

When the monitor is in the underscan mode, the dark RGB scanning lines may appear on the top edge of the screen. These are caused by an internal test signal, rather than the input signal.

Horizontal/vertical delay mode

The horizontal and vertical sync signals can be checked simultaneously in the H/V delay mode.

External sync input

When the EXT SYNC selector is in the on position, the monitor can be operated on the sync signal supplied from an external sync generator.

Auto/manual degaussing

Degaussing of the screen can be performed automatically when the power is turned on, or manually by pressing the DEGAUSS button.

On-screen menus

You can set color temperature, CHROMA SET UP, and other settings by using the on-screen menus.

Five menu languages

You can select the menu language from among the five languages on the menu.

EIA standard 19-inch rack mounting

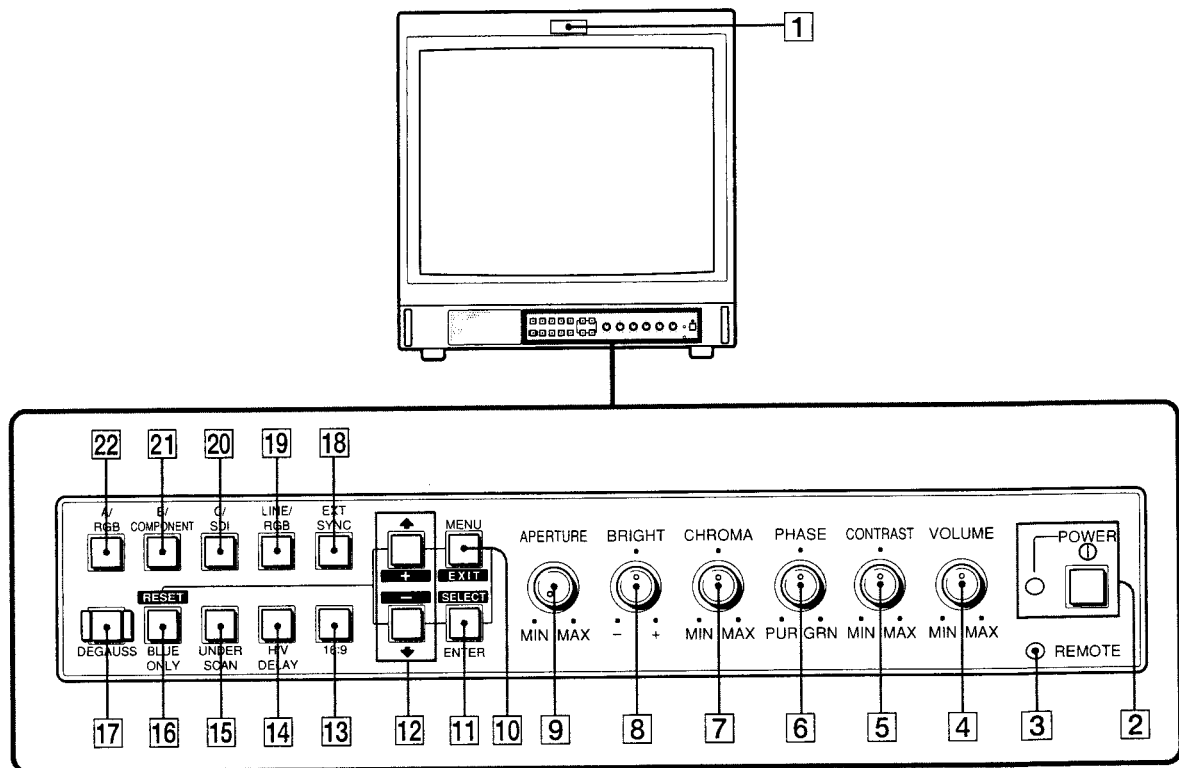
By using an MB-502B (for PVM-1454QM) or SLR-103 (for PVM-2054QM) mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the mounting bracket kit.

SDI (Serial Digital Interface) kit

By using SDI kit, the monitor can display SMPTE 259M 4:2:2 serial digital signal from a digital VTR. (ex. Sony 4:2:2 VTR)
SDI kit: 4:2:2 digital video board
Digital audio board

Location and function of parts and controls

Front panel



1 Tally lamp

Lights up when the video camera connected to this monitor is selected, indicating that the picture is being recorded.

2 POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

3 REMOTE indicator

Lights up when you set USER PRESET to ON in the menu, or when you connect a supplied cable to REMOTE connector (No. 17 pin is ground). The controls on the front panel do not work when this indicator lights up.

4 VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

5 CONTRAST control

Turn clockwise to make the contrast higher and counterclockwise to make it lower.

6 PHASE control

This control is effective only for the NTSC and NTSC_{4.43} color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

7 CHROMA control

Turn clockwise to make the color intensity higher and counterclockwise to make it lower.

8 BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

9 APERTURE control

Turn clockwise for more sharpness and counterclockwise for less.

Note

The APERTURE, CHROMA, PHASE control settings have no effect on the pictures of RGB signals.

10 MENU (EXIT) button

Press to make the menu appear. Press to return to the previous screen in the menu.

11 ENTER (SELECT) button

Press to decide a selected item in the menu.

12 ↑ (+)/ ↓ (-) buttons

Press to move the cursor (►) or adjust selected value in the menu.

13 16:9 selector

Press (light on) for the signal of 16:9 picture.

14 H/V DELAY selector

Press (light on) to observe the horizontal and vertical sync signals at the same time.

The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

15 UNDER SCAN selector

Press (light on) for underscanning. The display size is reduced by approximately 5% so that four corners of the raster are visible.

16 BLUE ONLY selector**RESET button**

Press (light on) to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase*" control adjustments and observation of VCR noise.

* "Phase" control adjustment is effective only for the NTSC signals.

Press to reset the setting in the menu.

17 DEGAUSS button

Press this button momentarily. The screen will be demagnetized. Wait for 10 minutes or more before activating this button again.

18 EXT SYNC (external sync) selector

Keep this button in the off position (light off) to operate the monitor on the sync signal from the displayed video signal.

Keep this button in the on position (light on) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

19 LINE/RGB input selector

Select the program to be monitored. Keep this button in the off position (light off) to feed a signal through the LINE A, LINE B or LINE C connectors. Keep this button in the on position (light on) to feed a signal through the RGB connectors.

20 C/SDI selector

When the LINE/RGB input selector is set to LINE (light off), press this button (light on) to feed a signal through the LINE C connectors.

When the LINE/RGB input selector is set to RGB (light on), press this button (light on) to feed the SDI signal (optional board is needed).

21 B/COMPONENT selector

When the LINE/RGB input selector is set to LINE (light off), press this button (light on) to feed a signal through the LINE B connectors.

When the LINE/RGB input selector is set to RGB (light on), press this button (light on) to feed the component signal.

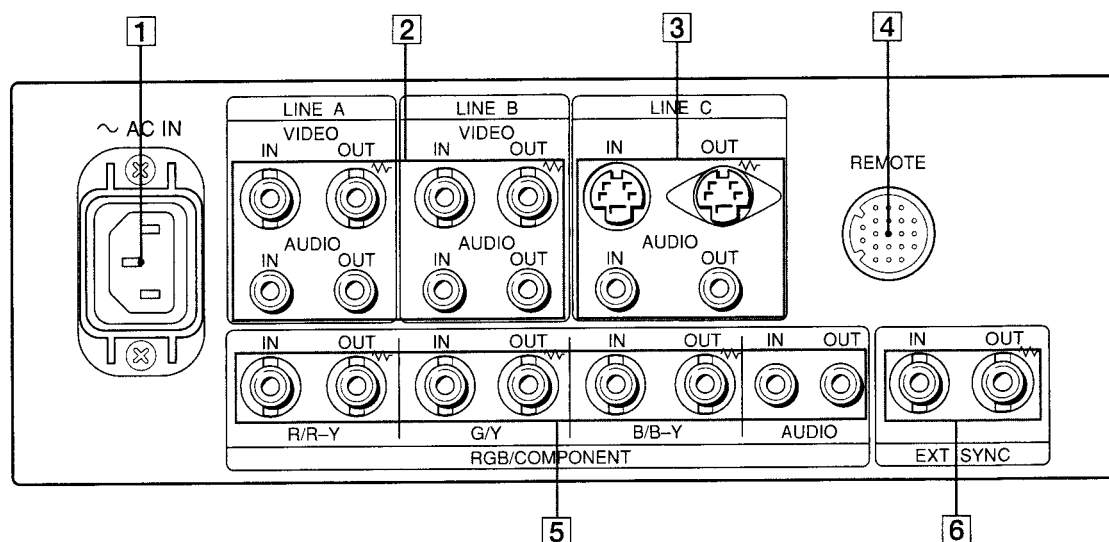
22 A/RGB selector

When the LINE/RGB input selector is set to LINE (light off), press this button (light on) to feed a signal through the LINE A connectors.

When the LINE/RGB input selector is set to RGB (light on), press this button (light on) to feed the RGB signal.

Location and function of parts and controls

Rear panel



(The ∞ mark indicates automatic termination.)

1 AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

2 LINE A, LINE B connectors

Two groups (A and B) of line input connectors for the composite video and audio signals and their loop-through output connectors.

To monitor the input signal fed through these connectors, keep the LINE/RGB selector in the LINE position (light off) and press the A/RGB or B/COMPONENT selector (light on) on the front panel.

VIDEO IN (BNC)

Connect to the video output of a video equipment, such as a VCR or a color video camera. For a loop-through connection, connect to the video output of another monitor.

VIDEO OUT (BNC)

Loop-through output of the VIDEO IN connector. Connect to the video input for a VCR or another monitor.

When the cable is connected to this connector, the 75-ohms termination of the input is automatically released, and the signal input to the VIDEO IN connector is output from this connector.

AUDIO IN (phono jack)

Connect to the audio output of a VCR or to a microphone via a suitable microphone amplifier. For a loop-through connection, connect to the audio output of another monitor.

AUDIO OUT (phono jack)

Loop-through output of the AUDIO IN jack. Connect to the audio input of a VCR or another monitor.

3 LINE C connectors

Y/C IN (4pin mini DIN)

Connect to the Y/C separate output of a video camera, VCR or other video equipment.

Y/C OUT (4pin mini DIN)

Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor. When the cable is connected to this connector, the 75-ohms termination of the input is automatically released, and the signal input to the Y/C IN connector is output from this connector.

AUDIO IN (phono jack)

Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phono jack)

Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

4 REMOTE connector (20pin)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller. For the pin assignment of this connector, see "Specifications" on page 10.

5 RGB/COMPONENT connectors

RGB signal or component signal input connectors and their loop-through output connectors.
To monitor the input signal fed through these connectors, keep the LINE/RGB selector in the RGB position (light on), and press the A/RGB or B/COMPONENT selector (light on) on the front panel.

R/R-Y IN, G/Y IN, B/B-Y IN (BNC)

When the EXT SYNC selector on the front panel is in the off position (light off), the monitor operates on the sync signal from the G/Y channel.

To monitor the RGB signal

Connect to the analog RGB signal outputs of a video camera.

To monitor the component signal

Connect to the R-Y/Y/B-Y component signal outputs of a Sony Betacam video camera.

R/R-Y OUT, G/Y OUT, B/B-Y OUT (BNC)

Loop-through outputs of the R/R-Y IN, G/Y IN, B/B-Y IN connectors

For RGB signal

Connect to the analog RGB signal inputs of a video printer or another monitor.

For component signal

Connect to the R-Y/Y/B-Y component signal inputs of a Betacam video recorder.

When the cables are connected to these connectors, the 75-ohms termination of the inputs is automatically released, and the signal inputs to the R/R-Y IN, G/Y IN, B/B-Y IN connectors are output from these connectors.

AUDIO IN (phono jack)

Connect to the audio output of video equipment when the analog RGB or component signal is input.

AUDIO OUT (phono jack)

Loop-through outputs of the AUDIO IN connector.

6 EXT SYNC (external sync) connectors

To use the sync signal fed through this connector, press the EXT SYNC selector (light on).

IN (BNC)

When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector.

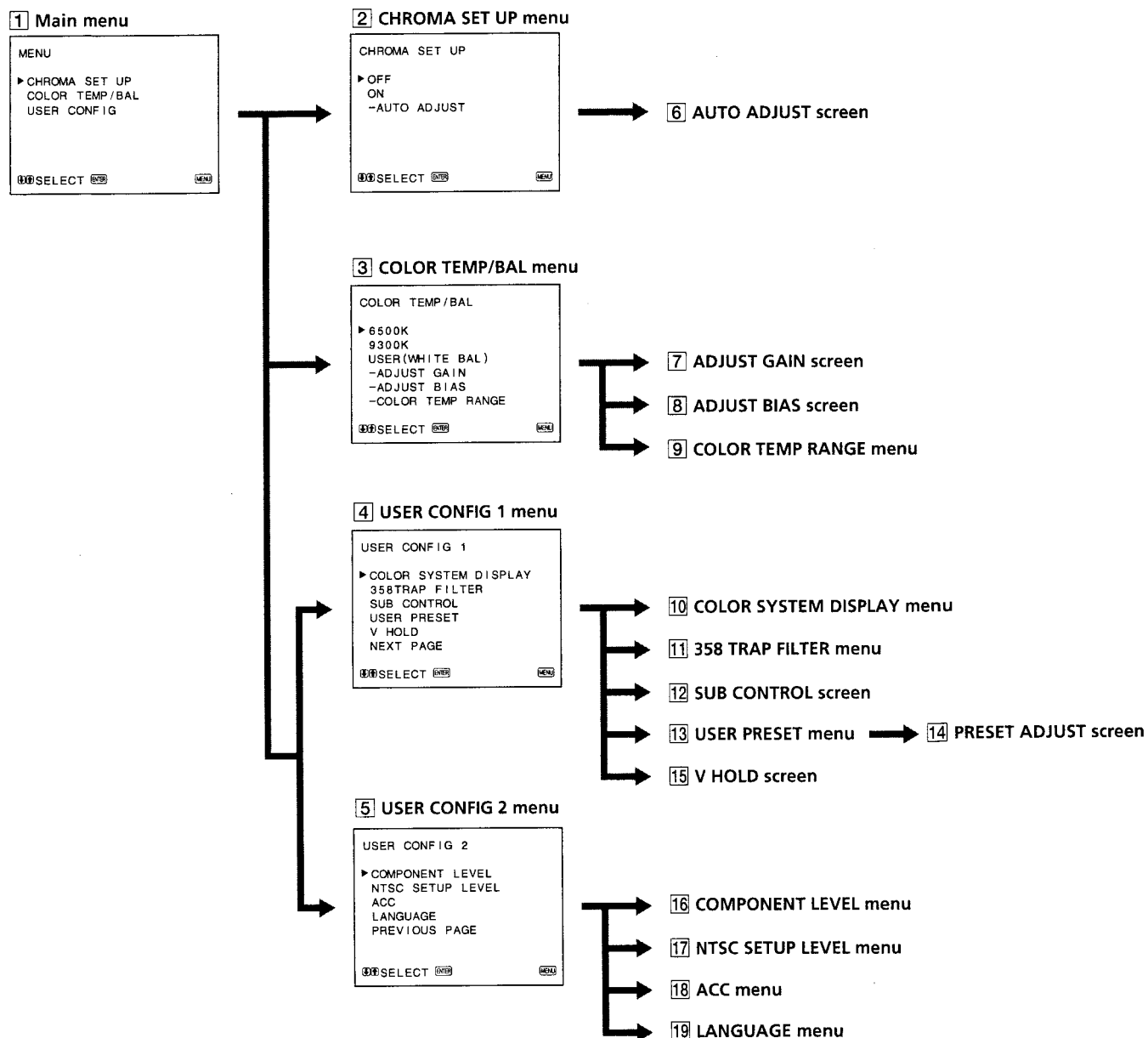
OUT (BNC)

Loop-through output of the EXT SYNC IN connector.
Connect to the external sync input of video equipment to be synchronized with this monitor.

When the cable is connected to this connector, the 75-ohms termination of the input is released, and the signal input to the IN connector is output from this connector.

Using on-screen menus

The flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. The boxed number is for instructions on the next page.



Operating through menus

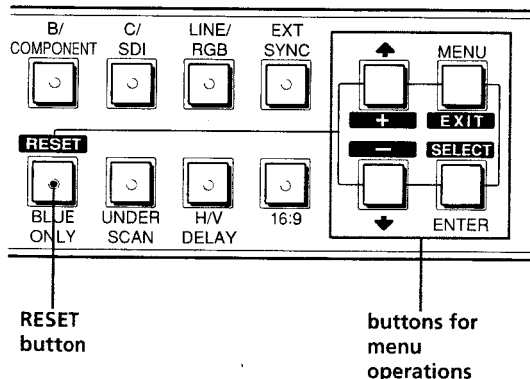
There are five buttons for menu operations on the front of the monitor. To display the main menu, first press MENU. The buttons you can use appear at the bottom of the menu screen.

Functions of the buttons

Button	To select menu item	To adjust menu item selected
MENU EXIT	return to the previous menu	return to the previous menu
ENTER SELECT	decide a selected item	select an item
↑ +	move the cursor (►) upwards	increase selected value
↓ -	move the cursor (►) downwards	decrease selected value
RESET		reset current adjustment value to the factory setting

(The above items in white type correspond to the marks in the menu.)

front of monitor



1 Main menu

Select an item and press ENTER to go to the following menu.

2 CHROMA SET UP menu

Set to ON to adjust the internal decoder for CHROMA and PHASE (NTSC signal only) after AUTO ADJUST ([6]). [OFF]

3 COLOR TEMP/BAL menu

Select the color temperature from among 6500K, 9300K and USER. USER is set to 6500K in the factory setting. You can adjust or change the color temperature in USER mode (a measuring instrument is needed). [6500K]

4 USER CONFIG 1 menu

Select an item to adjust. To go to the USER CONFIG 2 menu, select NEXT PAGE.

5 USER CONFIG 2 menu

Select an item to adjust. To go to the USER CONFIG 1 menu select PREVIOUS PAGE.

6 AUTO ADJUST screen

Select the color bar signal (full, SMPTE, EIA) and press ENTER to start auto adjusting for CHROMA SET UP (NTSC signal only).

7 ADJUST GAIN screen

Adjust GAIN in USER mode.

8 ADJUST BIAS screen

Adjust BIAS in USER mode.

9 COLOR TEMP RANGE menu

Select the color temperature range in USER mode. [5000K-10000K]

10 COLOR SYSTEM DISPLAY menu

Select the color system display mode. In AUTO, the kind of color system being used appears on the screen each time you change the signal input. [AUTO]

11 358 TRAP FILTER menu

Color spill or color noise may be eliminated if you select ON (NTSC signal only). [OFF]

12 SUB CONTROL screen

You can finely adjust the controls on the front panel. CONTRAST, BRIGHT, CHROMA and PHASE control has a click at the center of its adjustment range. You can adjust the setting of the click position with this feature.

13 USER PRESET menu

You can preset each control to a desired level and set it. If you set USER PRESET to ON, the REMOTE indicator lights up and the controls on the front panel do not work. The monitor operates with the internal memory settings. For adjustment, select PRESET ADJUST. [OFF]

14 PRESET ADJUST screen

Adjust CONTRAST, BRIGHT, CHROMA, PHASE, VOLUME, APERTURE in USER PRESET.

15 V HOLD screen

Adjust the vertical hold if the picture rolls vertically. When you cannot read the display, select the input that is not connected.

16 COMPONENT LEVEL menu

Select the component level from among three modes.
N10/SMPTE for 100/0/100/0 signal
BETA 7.5 for 100/7.5/75/7.5 signal
BETA 0 for 100/0/75/0 signal

[N10/SMPTE]

17 NTSC SETUP LEVEL menu

Select the NTSC setup level from two modes. The 7.5 setup level is mainly used in north America. The 0 setup level is mainly used in Japan. [0]

18 ACC menu

Set ACC (Auto Color Control) circuit on or off. When the fine adjustment is needed, set ACC to OFF. Normally set it to ON. [ON]

19 LANGUAGE menu

You can select the menu language from among the five languages (English, German, French, Italian, Spanish) on the menu.

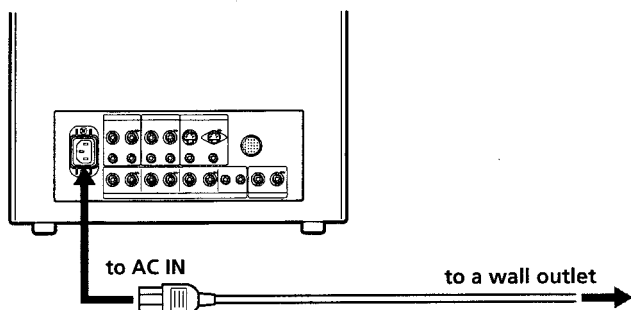
[ENGLISH]

([] indicates the factory setting position.)

Power sources

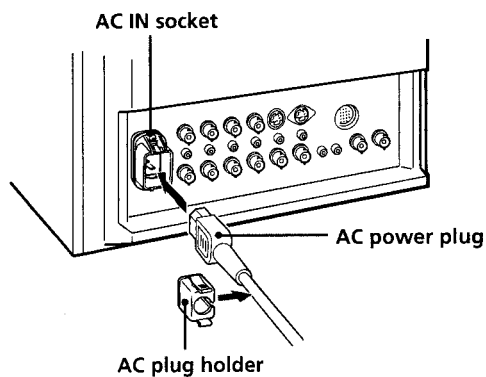
House current

Connect the AC power cord (supplied) to the AC IN socket and to a wall outlet.



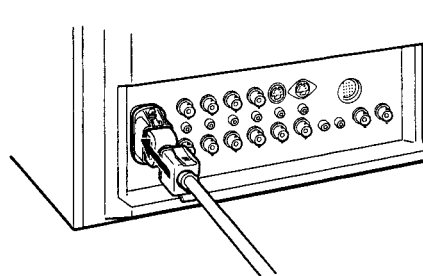
To connect an AC power cord securely with an AC plug holder

1



Plug the power cord into the AC IN socket. Then, attach the AC plug holder (supplied) on top of the AC power cord.

2



Slide the AC plug holder over the cord until it connects with the attached holder.

To remove the AC power cord

Pull out AC plug holder by squeezing the left and right sides.

Specifications



Video signal

Color system	PAL, SECAM, NTSC, NTSC _{4.43}
Resolution	600 TV lines
Aperture correction	0 dB – +6.0 dB
Frequency response	LINE 9.0 MHz (–3 dB) RGB 10.0 MHz (–3 dB)
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	7% over scan of CRT effective screen area
Underscan	5% underscan of CRT effective screen area
H. linearity	Less than 8.0% (typical)
V. linearity	Less than 7.0% (typical)
Convergence	Central area: 0.6 mm (typical) (PVM-1454QM) 0.7 mm (typical) (PVM-2054QM) Peripheral area: 0.8 mm (typical) (PVM-1454QM) 1.3 mm (typical) (PVM-2054QM) H: 1.0%, V: 1.5%
Raster size stability	
High voltage regulation	3.5% (PVM-1454QM) 4.0% (PVM-2054QM)
CRT	EBU phosphor
Color temperature	6,500K/9,300K (+8MPCD), selectable USER (3200K–10000K, factory setting is 6500K)

Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector (See the pin assignment on the next page.) VIDEO IN: BNC connector 1Vp-p ±6 dB, sync negative AUDIO IN: phono jack, –5 dBs, more than 47k ohms R/R-Y, G/Y, B/B-Y IN: BNC connector R, G, B channels: 0.7 Vp-p, ±6 dB Sync on green: 0.3 Vp-p, negative, 75 ohms terminated R-Y, B-Y channels: 0.7 Vp-p, ±6 dB Y channel: 0.7 Vp-p, ±6 dB (Standard color bar signal of 75% chrominance) EXT SYNC IN: BNC connector Composite sync 4 Vp-p, ±6 dB, negative
Loop-through outputs	Y/C OUT: 4-pin mini DIN connector VIDEO OUT: BNC connector, 75 ohms terminated AUDIO OUT: phono jack R/R-Y, G/Y, B/B-Y OUT: BNC connector, 75 ohms terminated EXT SYNC OUT: BNC connector, 75 ohms terminated
Remote input	REMOTE: 20-pin connector (See the pin assignment on the next page.)
Speaker output	Output level 0.8 W

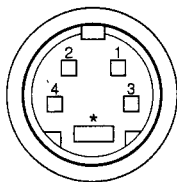
General

Power consumption	99 Wh (incl. SDI) 90 Wh (without. SDI) (PVM-1454QM) 130 Wh (incl. SDI) 120 Wh (without. SDI) (PVM-2054QM)
Power requirements	100 – 240 V AC, 50/60 Hz
Operating temperature range	0 – 35°C
Storage temperature range	–10 – +40°C
Humidity	0 – 90%
Dimensions	PVM-1454QM Approx. 346 × 340 × 411.5 mm (w/h/d) (13 ⁵ / ₈ × 13 ¹ / ₂ × 16 ¹ / ₄ inches) PVM-2054QM Approx. 450 × 457.5 × 503 mm (w/h/d) (17 ³ / ₄ × 18 ¹ / ₈ × 19 ⁷ / ₈ inches) not incl. projecting parts and controls
Mass	PVM-1454QM Approx. 16.7 kg (36 lb 14 oz) PVM-2054QM Approx. 30 kg (66 lb 2 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

Specifications

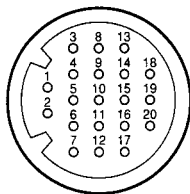
Pin assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (20-pin)



Pin No.	Signal	Wire color
1	Blue only	Brown
2	H/V DELAY	Red
3	MAIN/SUB*	Orange
4	EXT SYNC	Yellow
5	DEGAUSS	Green
6	R ch ON/OFF*	Blue
7	TALLY	Purple
8	LINE B	Grey
9	GND	White
10	GND	Black
11	GND	Pink
12	GND	Light Blue
13	LINE A	Spiral Orange
14	LINE/RGB	Spiral Yellow
15	GND	Spiral Green
16	L ch ON/OFF*	Spiral Blue
17	REMOTE	Spiral Purple
18	LINE C	Spiral Grey
19	UNDER SCAN	Spiral Pink
20	16:9	Spiral Light Blue

(* For digital audio control)

Design and specifications subject to change without notice.